

EXHIBIT D

Redacted

Pending Order on Joint Motion to Impound

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

UNITED STATES OF AMERICA, *et al.*,

Plaintiffs,

v.

JETBLUE AIRWAYS CORPORATION

and

SPIRIT AIRLINES INC.,

Defendants.

CASE NO. 1:23-cv-10511-WGY

HON. JUDGE WILLIAM G. YOUNG

REBUTTAL EXPERT REPORT OF NICHOLAS HILL, PHD

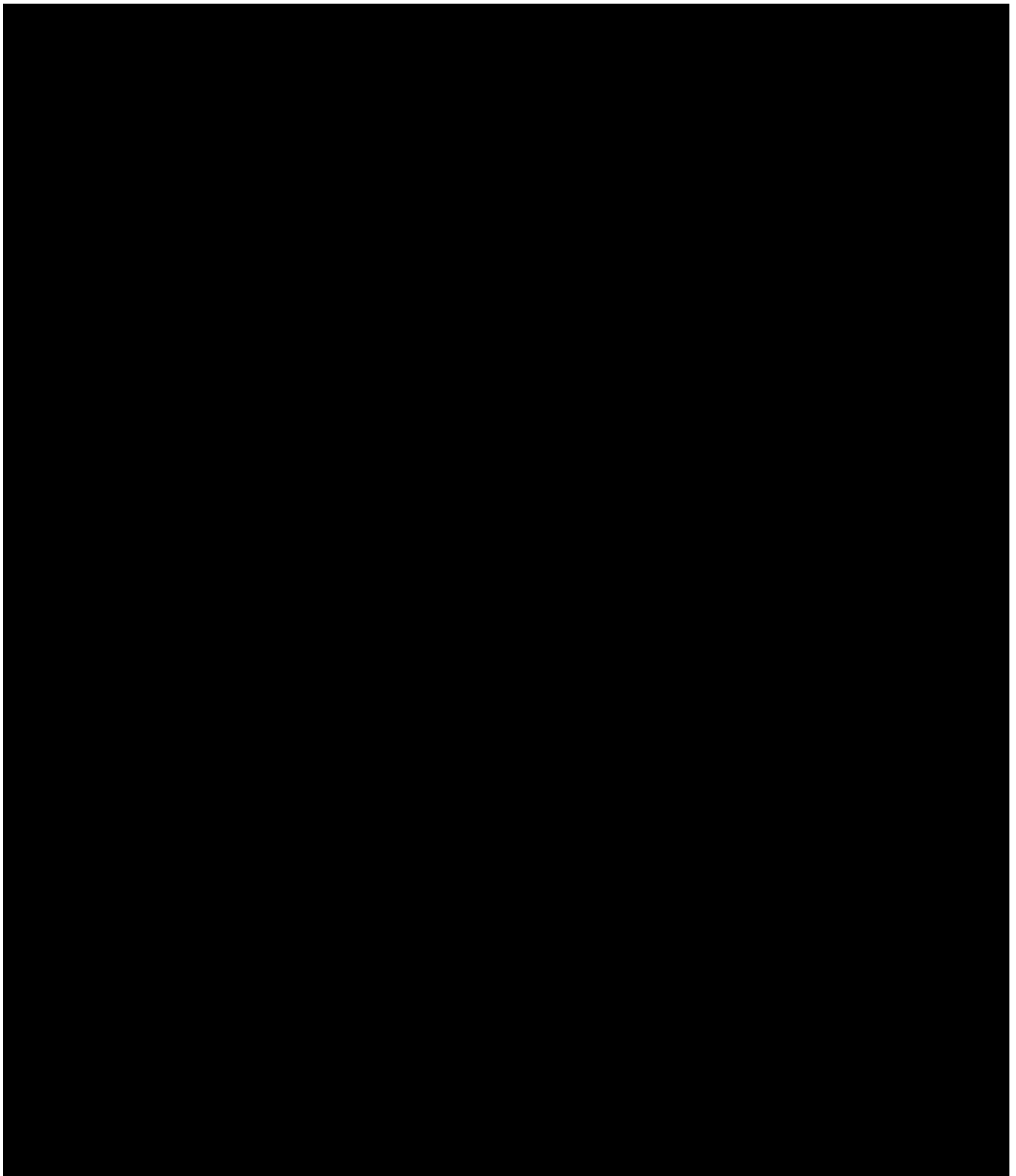
3 AUGUST 2023

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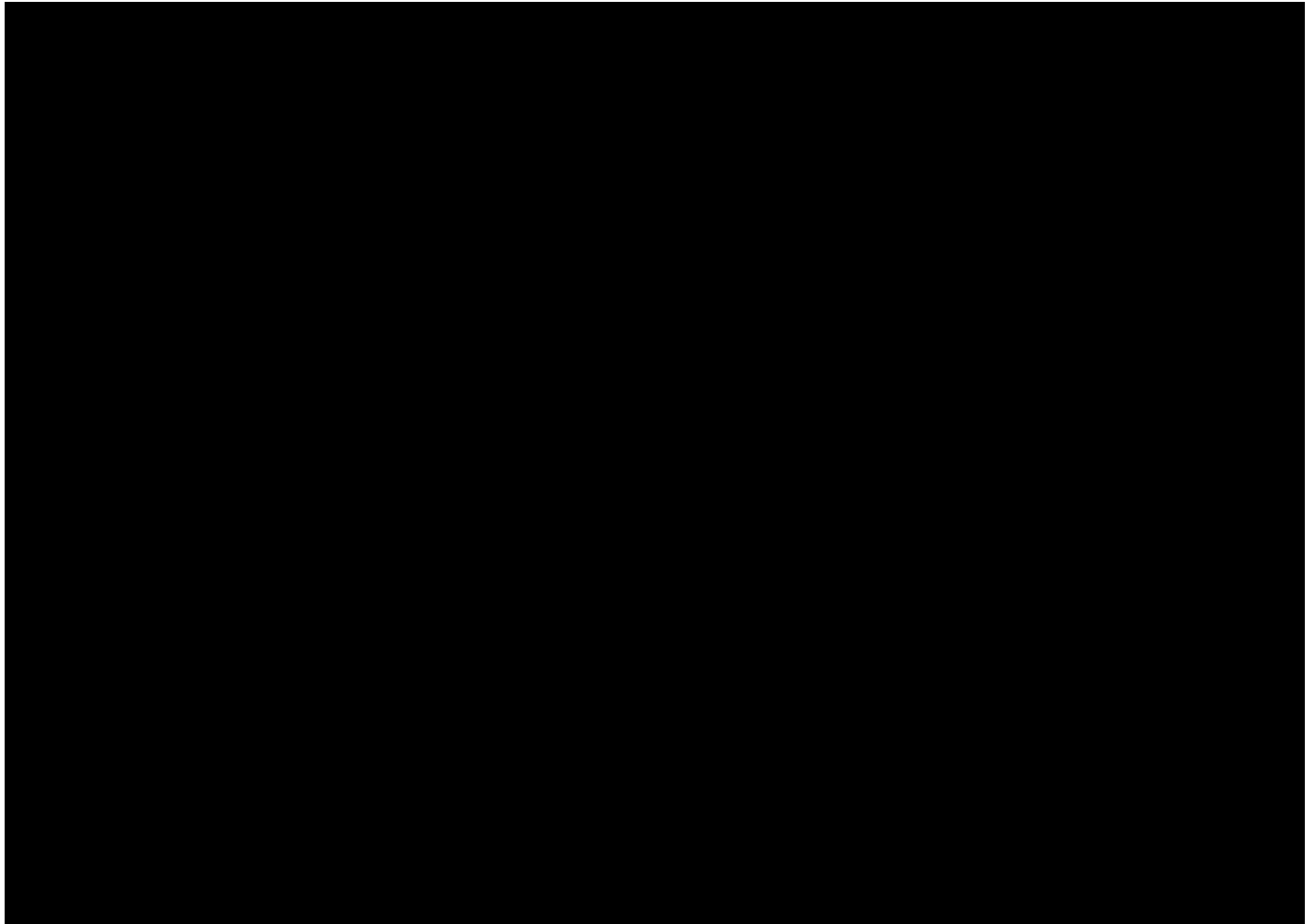
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- (81) For all the reasons described above, purchasing Spirit would allow JetBlue to expand with a speed and breadth that would otherwise not be feasible. Further, Spirit's fleet is perfectly aligned with

JetBlue's aircraft strategy, which focuses on the A320 family. The merger therefore presents a unique opportunity to expand the JetBlue effect broadly and rapidly. It will allow JetBlue to expand to a scale at a speed that would otherwise not be possible. And this expansion is likely to increase competition between JetBlue and rival carriers—especially the Big Four—and benefit consumers.



- (113) This raises an important question: do consumers who fly on JetBlue or on Spirit benefit more? A simple approach to answering this question is to compare how the two services perform when competing on routes against one another. If consumers on the whole prefer JetBlue's combination of higher prices and higher quality, one would expect to see it to win more passengers than Spirit on routes where they compete. Conversely, if Spirit's blend of lower prices and no-frills service is preferred, one would expect it to win more passengers than JetBlue on routes on which both compete.
- (114) Prof. Gowrisankaran himself adopts an approach of this type in his report. He argues that consumers reveal their preferences for products through their purchases.¹³⁷ He argues that one can therefore deduce that Spirit's model has value by looking at the frequency with which it is chosen. For example, he states that Spirit has more passengers than JetBlue in 14 of the 51 nonstop threshold complaint routes.¹³⁸

¹³⁷ Gowrisankaran Report, at ¶ 328.

¹³⁸ Gowrisankaran Report, at ¶ 328.

- (115) Prof. Gowrisankaran's finding implies, however, that JetBlue has more passengers on 37 of these routes. Further, JetBlue on average attracts more passengers than does Spirit when the two airlines compete on a route. Figure 44 summarizes the average passenger-based route shares of JetBlue and Spirit on nonstop overlap routes on which both competed between the third quarter of 2021 and the second quarter of 2022.¹³⁹ It shows that JetBlue outperforms Spirit whether one combines route-by-route results without weighting or weighting by the total number of passengers on each route. This evidence is more consistent with JetBlue delivering more value to consumers on average than it is with Spirit delivering more value to consumers.¹⁴⁰ This suggests that my example above, which assumed equivalent average value propositions for JetBlue and Spirit, is likely neutral or biased against JetBlue.¹⁴¹

Figure 36. Average passenger-based shares for JetBlue and Spirit on nonstop overlap routes

Routes	Method	JetBlue	Spirit
Nonstop overlaps	Passenger-weighted	19%	11%
	Unweighted	21%	16%
Nonstop threshold complaint overlaps	Passenger-weighted	29%	15%
	Unweighted	29%	20%

Source: Gowrisankaran DB1B, 2021 Q3–2022 Q2.

- (116) In summary, Prof. Gowrisankaran's analysis focuses on the impact of JetBlue and Spirit on all fares. As the example above demonstrates, this approach is biased in Spirit's favor when comparing Spirit with JetBlue. An alternative approach is to instead evaluate each carrier's competition effect—i.e., its impact on rival carriers' fares—since that effect likely bears more directly on that carrier's competitive impact.

¹³⁹ Using revenue shares would result in a large discrepancy in JetBlue's favor.

¹⁴⁰ An underlying assumption in this comparison is that each airline adds frequencies on a route until the marginal benefit of doing so is reached. Put differently, if one carrier is more attractive to consumers on a route than is the other, one would not expect it to offer less flights.

¹⁴¹ See Sections 7.5.1 and 9.2.2.a for more evidence on this point.



- (202) Figure 70 provides basic information about these “increased competition” routes.¹⁸⁵ The first row summarizes all such routes. The second row includes only those increased competition routes on which Spirit has an entry intensity above 0.25—i.e., those routes on which JetBlue’s impact on rival fares is likely to be particularly large compared to Spirit’s. The final row includes 15 holdout complaint routes. These routes, as discussed in detail in Section 8, are routes that exceed the concentration threshold and that do not have a disqualifying deficiency.

Figure 70. Summary of Spirit nonstop routes that are likely to benefit from the transaction and those that may be harmed

Route type	Number of routes	Number of total passengers (millions)	Number of rival carrier passengers (millions)
Increased competition	199	93	78
Increased competition with Spirit's intensity above 0.25	91	25	17
Holdout threshold complaint routes	15	5	2

Sources: Gowrisankaran DB1B; DB1B, 2011–2015; Gowrisankaran T100, Gowrisankaran Report, at Appendix C. Notes:

- [1] Increased competition routes are Spirit nonstop routes from 2021 Q3 to 2022 Q2 where JetBlue had less than 1% passenger share in each quarter. Routes that Spirit exited as identified by Prof. Gowrisankaran are excluded from this sample.
 [2] Spirit's intensity on each route is defined as its daily flight frequency in a quarter divided by the sum of its daily flight frequency and pre-existing non-Spirit flight equivalents, i.e., daily passengers excluding Spirit over 160. Routes labeled “Increased competition with Spirit's intensity above 0.25” are the subset of “Increased competition” routes where Spirit had an intensity of at least 0.25 in each quarter.
 [3] Holdout threshold complaint routes are nonstop overlap routes exceeding the concentration thresholds and are unaffected by divestitures.
 [4] Rival carrier passengers include all passengers excluding those on Spirit and JetBlue.

- (203) The first two rows in the figure show that a large number of routes are likely to see benefits and that these routes are traveled by many passengers, both overall and on rival carriers. Conversely, the final row shows that there are few holdout complaint routes and that these are traveled by relatively few passengers. These figures show that the transaction is likely to benefit substantially more passengers than there are flying on the 15 holdout complaint routes.

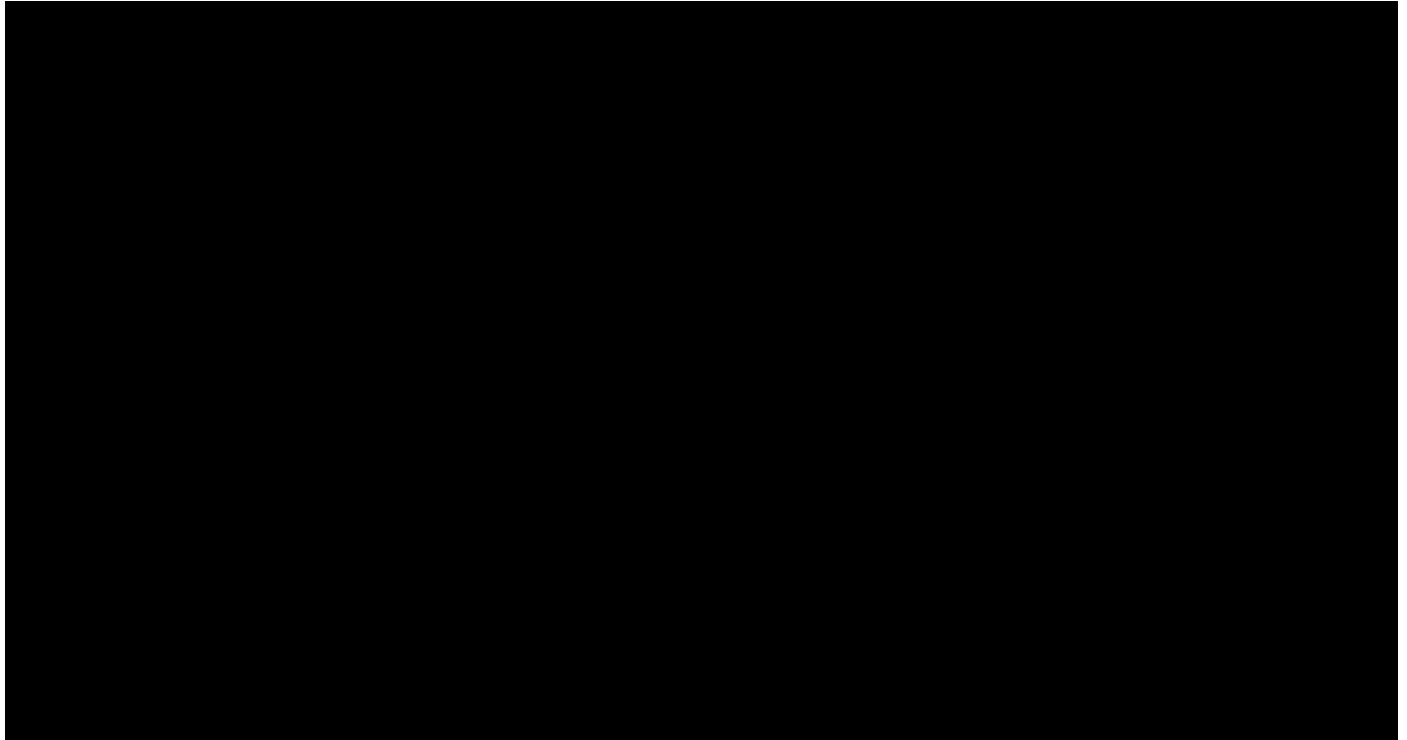
¹⁸⁴ I define such routes as routes on which Spirit competes nonstop and JetBlue has a share of less than 1 percent.

¹⁸⁵ This naming convention is not intended to imply that other routes may not also benefit from the transaction by seeing increased competition.

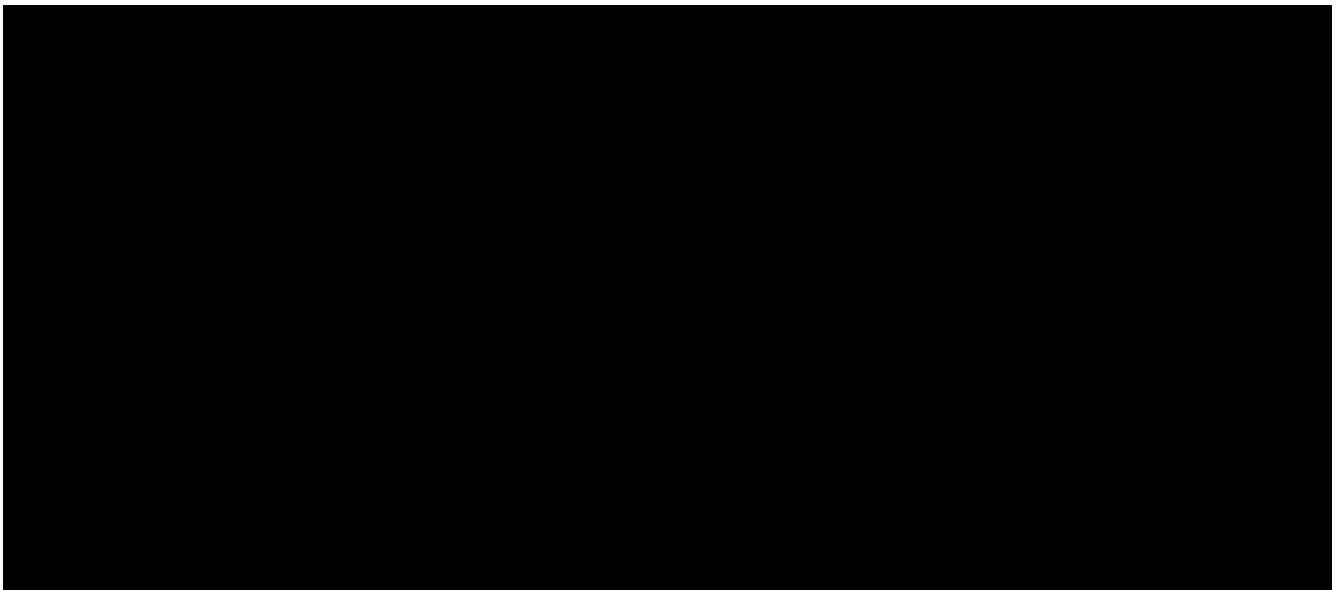
- (204) I use the results from my entry intensity model to estimate the likely benefits to consumers on the increased competition routes. I do so by first calculating how the fares of rival carriers will decrease when JetBlue's more effective competitive constraint replaces Spirit's competitive constraint. I then apply these savings to rival carriers' passengers to estimate the amount that they will save.¹⁸⁶ I find that consumers on these routes alone will likely save between \$242 and \$614 million dollars as a result of the transaction.
- (205) I cannot use my model to estimate how fares are likely to change on the holdout complaint routes.¹⁸⁷ I can, however, sum up Prof. Gowrisankaran's predictions of increased fares on these routes. I believe that his model and fare increase predictions are unreliable and significantly overestimate fare increases for the reasons already discussed in Section 7.5.2 and because they ignore the possibility of mitigating entry by rival carriers. Notwithstanding these concerns, Prof. Gowrisankaran predicts that average fares on these routes will increase by \$108 million dollars.
- (206) In aggregate, then, my predictions of benefits on the increased competition routes are significantly larger than Prof. Gowrisankaran's predicted increase in fares on the holdout complaint routes. This finding is consistent with the transaction benefiting consumers overall.

¹⁸⁶ I assume in these calculations that the benefits that JetBlue passengers will realize from its entry will outweigh or equal any harm to Spirit passengers occasioned by its exit on these routes. I make this assumption for three main reasons. First, when both JetBlue and Spirit compete on a route, JetBlue's market share is higher on average, despite its higher price. This indicates that JetBlue likely delivers more value to consumers. Second, Prof. Gowrisankaran's analysis shows that entry by JetBlue has a larger impact on Spirit's fares than entry by Spirit does on JetBlue's fares. Spirit's larger response to JetBlue indicates that its product likely delivers less value to consumers than does JetBlue's. Third, JetBlue's Blue Basic service means that some Spirit passengers will likely be unaffected by (or even benefit from) the transaction because they can switch to Blue Basic tickets.

¹⁸⁷ The entry intensity model uses entry intensity intervals (i.e., 0 to 0.25, 0.25 to 0.5, and 0.5 to 1) to estimate the effect of entry intensity on fares. It does so to be more flexible and to avoid being tied to a particular functional form (e.g., the quadratic form). A consequence of this is that unless it has many intervals—so that each is very small—it cannot be used reliably to predict the impact of combining the entry intensity of two firms. This is because material increments in JetBlue's relative capacity due to the merger will not have any effect in the model unless the merged firm's relative capacity is in a new interval. For example, if JetBlue and Spirit have relative capacities of 0.12, the merged firm's relative capacity will be 0.24. This means that the merged firm's impact on fares will be the same as pre-merger JetBlue (because both have relative capacities below 0.25), despite the merged firm being twice as large. Similarly, suppose JetBlue's relative capacity is 0.02 and Spirit's is 0.21. The merged firm's relative capacity will be 0.23. This is below the 0.25 interval, so the merged firm's impact on fares will be the same as JetBlue's, which is not plausible.



- (234) Figure 77 summarizes concentration levels and changes in concentration due to the merger at the divestiture airports using gates at Boston, Fort Lauderdale, and Newark and slots at LaGuardia. The final column of the table shows that there will be only small changes in concentration, as measured by the HHI, at Boston, LaGuardia, and Newark. Concentration will increase at Fort Lauderdale, but the post-merger HHI (second-to-last column) will be well below the highly concentrated threshold defined by the Horizontal Merger Guidelines. Figure 77 shows that there is unlikely to be a substantial reduction in competition at the divestiture airports according to the concentration



thresholds upon which Plaintiffs relied when identifying routes that they believe would likely see a reduction in competition.

Figure 77. Change in concentration at divestiture airports

Airport	Pre-merger HHI	Post-merger HHI	Change in HHI
LaGuardia	3,117	3,118	1
Newark Liberty International	5,479	5,582	103
Boston Logan International	2,207	2,254	46
Fort Lauderdale-Hollywood International	1,727	2,118	392

Sources: FAA Slot Administration Data; JetBlue Second Request Response Attachment 13-1.

Notes:

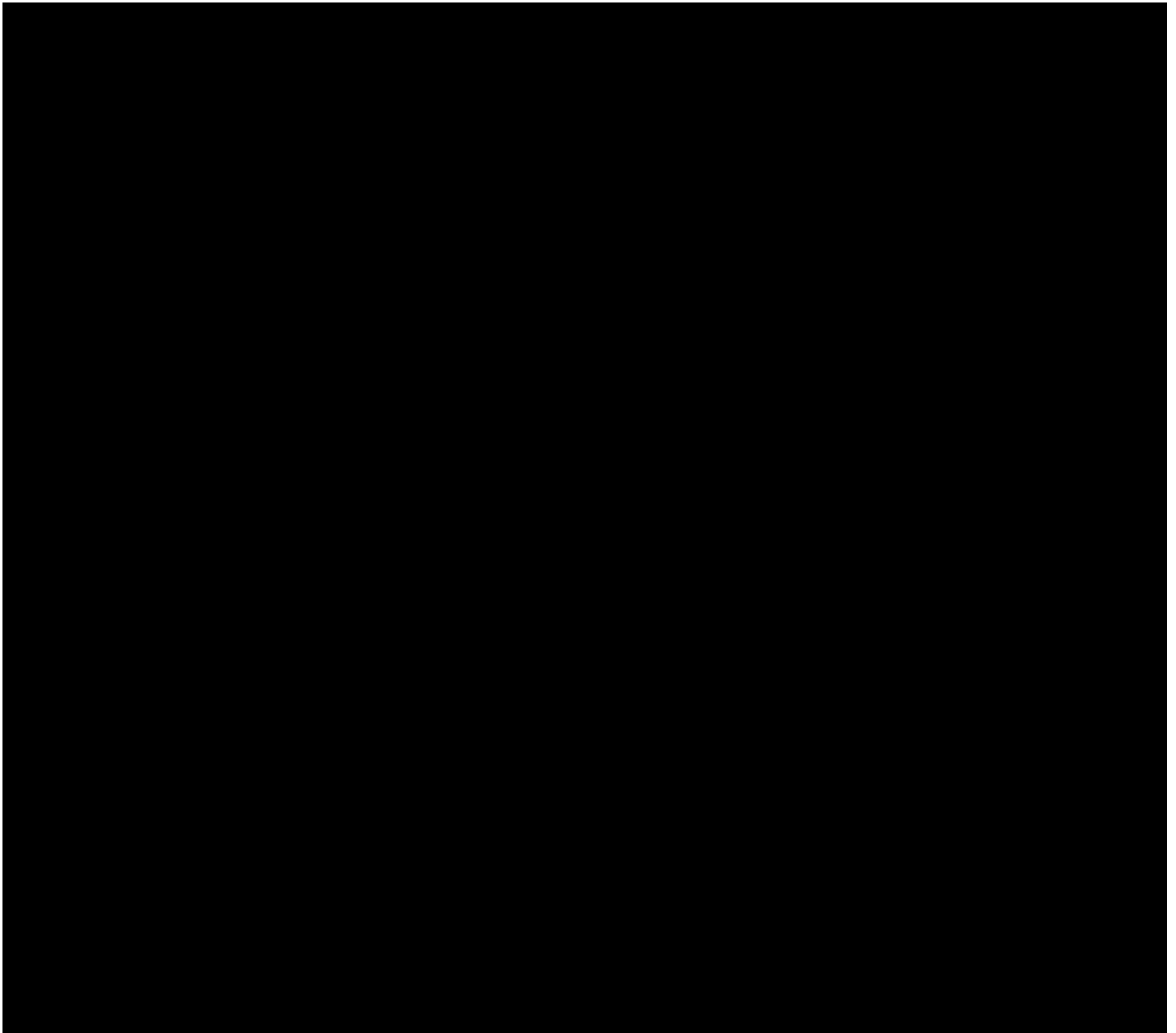
[1] Summer 2022 slot operator totals are used for LaGuardia HHI calculations. Newark, Boston, and Fort Lauderdale results are based on 2022 passenger boarding gate holdings.

[2] To be conservative, HHIs at Newark and Boston assume that one Spirit gate at each is returned to airport authorities and not reallocated to another carrier.

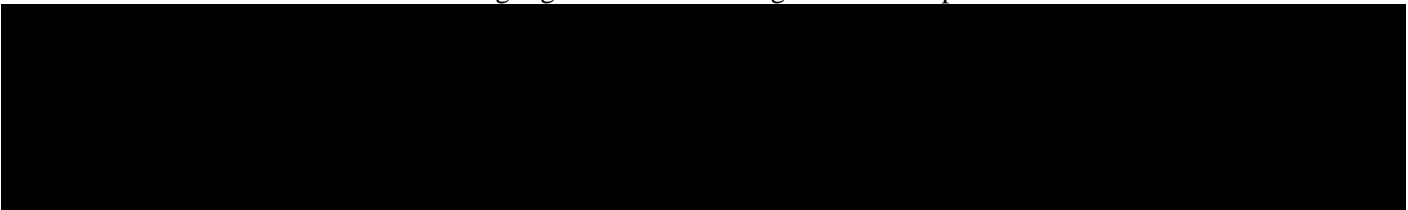
[3] Frontier has a small presence at LaGuardia pre-merger, operating four slots per day during this time.

- (235) As discussed above, the concentration numbers in Figure 77 also implies that routes that involve these airports are unlikely to see a substantial reduction in competition in the aggregate. Allegiant and Frontier may choose to compete on a different set of routes than did Spirit, but Spirit itself would also likely have dynamically shifted its schedule over time. It is therefore more appropriate to evaluate the impact of the divestitures on competition at the airport level.
- (236) In a similar vein, Dr. Chipty argues that the divestitures cannot address a potential loss of competition on international overlap routes since Allegiant does not fly international routes and Frontier cannot generally fly routes greater than 1,500 miles out of LaGuardia.²²³ I agree with Dr. Chipty's facts but not with her conclusion. It is possible that Allegiant may no longer serve Spirit's international nonstop routes after the merger. But if it no longer serves these routes, it will likely use its resources at the divestiture airports to compete on domestic routes, thereby increasing competition on those other routes. The key issue is rather whether the divestiture will likely preserve competition at the four divestiture airports.

²²³ Chipty Report, at ¶¶ 77, 97. Frontier can exceed this distance restriction to fly to Denver (one of its hubs) or on Saturdays.



(306) Third, Spirit's low percentage of routes (10 percent) on which it has the highest share is a reminder that it is a niche product that is rarely the top choice of consumers overall.²⁷⁵ Conversely, JetBlue is often the top choice of consumers overall (64 percent). This underlines that JetBlue is often the top choice of consumers because of its blend of high quality and low prices and is more evidence that is consistent with JetBlue delivering higher value on average than does Spirit.



²⁷⁵ See, e.g., Gowrisankaran Report, at Exhibit 23.